

Virtual Solar Observatory
Birds of a Feather Session

5:30 - (we hope not) 7:00 PM

MCC 125



Background (I)



- Approved for “new start” by FY02 SEC Senior Review
- Budget guidelines for FY02 - FY05 in letter from SS/Director, 2001 August 24
- Received SDAC funding for FY02 effort in 2002 January
- Received unsolicited proposals from three *collaborating* groups in 2002 February
 - Same proposal, except for budget, from all three
 - Strategy was to eliminate unnecessary overhead charges for subcontracting
- Proposals reviewed by VSO Steering Committee, 2002 February



Background (II)



- Milestones:
 - Proposal packages to GSFC Grants, 2002 April 1
 - Grants awarded (Stanford U. and NSO on 2002 April 15, Montana State U. on 2002 April 23)
 - Holding fortnightly telecons since 2002 May 6
 - BoF session at American Astronomical Society / Solar Physics Division Meeting in Albuquerque, New Mexico, 2002 June 3
 - Distribute strawman for VSO prototype to community (SPD/SPA), 2002 November 25
 - BoF / community meeting during American Geophysical Society meeting in San Francisco CA, 2002 December 6 (*this session*)
- Milestones (upcoming)
 - If community approves, proceed to contract(s) for Phase B/C/D during 2003Q1.



Some of the people involved in the VSO



- **Steering Committee**

- Todd Hoeksema (NASA HQ)
- Rob Bentley, *chair* (MSSL, UK; EGSO)
- Sam Freeland (LMSAL)
- Steve Walton (CSUN)
- Dominic Zarro (L-3/GSFC)

- **NASA**

- Chuck Holmes (MO&DA Program Manager)
- Joe Gurman (GSFC/SDAC; *de facto* project scientist)
- George Dimitoglou (L-3/GSFC)
- [currently, the only VO NASA is supporting]

- **Study teams**

- Rick Bogart, Karen Tian (Stanford)
- Frank Hill [EGSO, NVO], Steve Wampler (NSO)
- Piet Martens, Alisdair Davey (MSU)

- **And *you***

- Albuquerque AAS/SPD BoF
- This meeting
- Implementation phase (competitive)
- Any input, any time



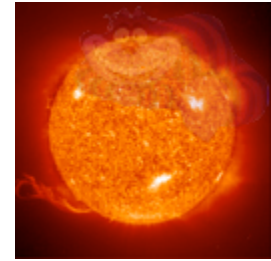
What Do We Mean by a VSO?



- It should be distributed (no more Grand Central Stations)
- It should let us search for and access data from multiple missions / observatories / instruments
- It should provide access to analysis software, instrument descriptions, &c. that enable use of the data for research
- It should be easy to add new data sets
- (Given the funding profile for this effort) it has to attempt to draw a “small box” around a small set of attributes that are useful for doing research



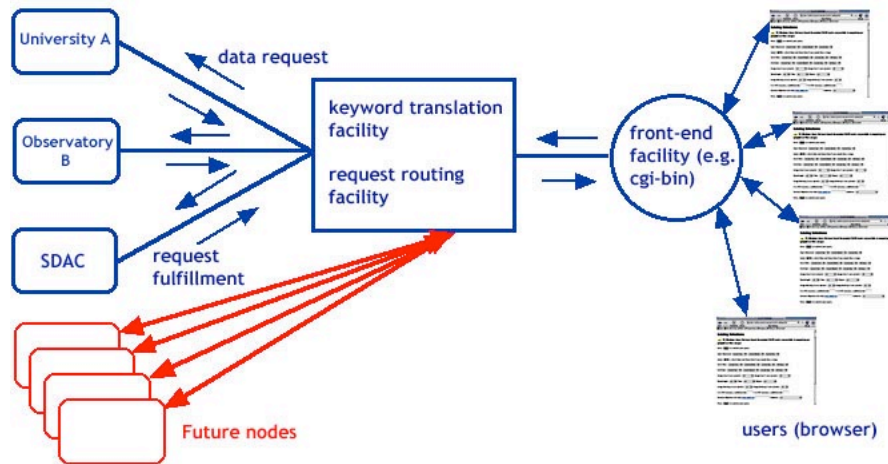
What a VSO Won't Do (at least at first)



- Data mining
- Remote processing
 - Not clear if network bandwidth is/ will be a limiting factor, but in any case....
 - Can be a “research opportunity” (see below), *e.g.* CoSEC
- Access control (ever) - The VSO will be in the business of giving data away.



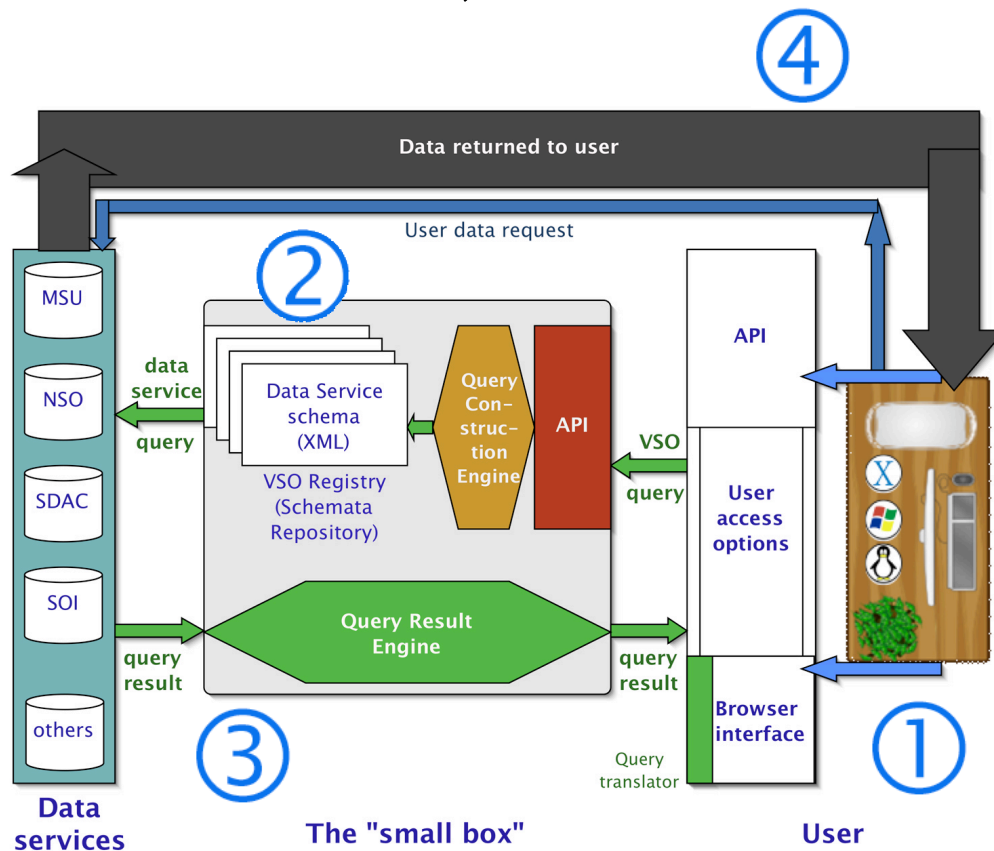
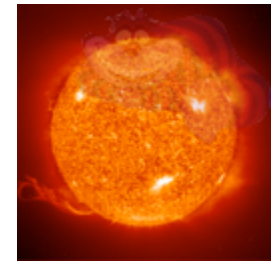
Original Design Concept



- Either we were really smart:
 - Same model adopted by NVO, PDS; EGSO examining
- or maybe there was exactly one obvious way to do this
- Three parts:
 - distributed archives
 - **metadata** “broker” facility
 - Web-based front end
- Can have different implementations
 - Peer-to-peer
 - Grid
 - &c.
- Will be low-cost
 - No more than \$1.2M over next four years



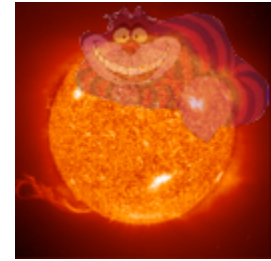
What We're Proposing (The "Small Box")



1. Access through a browser or a API
2. "Small box" uses registry of XML data service schema to construct appropriate queries for each relevant data service
3. API or browser can refine queries
4. Final data transfer is direct to requestor (no middleman)



And the steps are....



- Study (just completed)
 - Evaluation by Steering Committee
- Prototype / implementation (FY03, FY04)
 - Register data provider four sites as prototype
 - Test usefulness / usability with community
- IFF the prototype proves useful to the community
 - Continue *limited* development (e.g. search registry, links with other funded efforts), FY04
 - Add “research opportunities” (separately funded):
 - Distributed processing, event / feature lists, &c.
 - Connections with other efforts (EGSO, LWS DS, possibly NVO)
 - Extended maintenance phase
 - Add nodes
 - Support new nodes, old nodes



So What We Need Now Is....



- To know what *you* think



VSO resources online



- VSO homepage:
 - <http://virtuelsolar.org/>
- Strawman proposal:
 - http://virtuelsolar.org/docs/VSO_strawman_20021125.pdf
- Sample XML schemas:
 - <http://virtuelsolar.org/docs/schemas/>